



Maintenance and Repair  
of Aluminium Windows



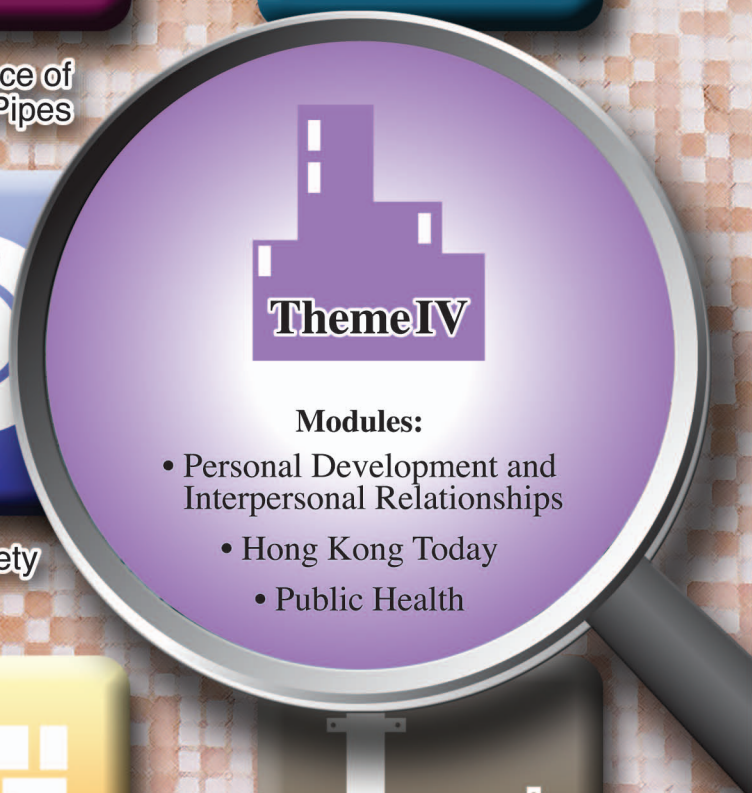
Maintenance of  
Drainage Pipes



Seepage at Roof



Fire Safety



### Theme IV

#### Modules:

- Personal Development and Interpersonal Relationships
- Hong Kong Today
- Public Health



Alteration and Addition  
Works



Problems on Walls



Environmental  
Hygiene



# Building Works and Community Life





# Building Works and Community Life



## Topics to be Studied

- 4.1: Domestic Water Seepage Problem and the Relationship with Neighbours
- 4.2: Drainage System and the Spread of Communicable Disease
- 4.3: Building Safety and Public Safety



## Building Works and Community Life

### Modules :

Personal Development and Interpersonal Relationships

Hong Kong Today

Public Health

### Introduction

Building safety can be divided into four aspects, i.e., structural safety, fire safety, environmental hygiene and public safety. This shows that building safety is more than a personal matter. It also affects the relationship among neighbours and even concerns the whole community.

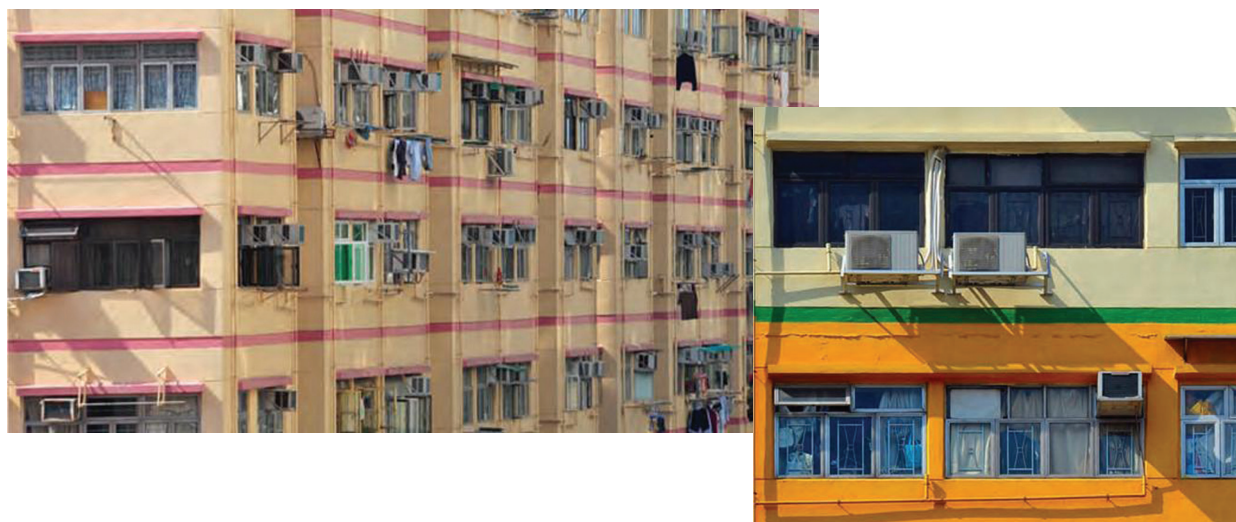
The quality of building components (such as aluminium windows and drain pipes) and whether they are in a good condition are the concerns of the owners of the building. If the components are not maintained properly and cause hazards, or if there are illegal alterations, the community and residents will also be affected directly or indirectly. The rapid spread of SARS in 2003, and the loosening and falling of windows from height are good examples. In this theme, problems (such as seepage that causes nuisance to neighbours, dilapidated drain pipes that lead to the spread of infectious diseases, and loosening of aluminium windows that endanger passers by) are presented for the students to study the issues such as interpersonal relationships, quality of life and public health. This can help students to understand the implications of building safety on the public, what owners need to pay attention to and what their responsibilities are.





## Questions for Enquiry

- Is building safety merely a personal matter? Does it also relate to the community?
- What impacts will be made on the community if there are unauthorised alterations to the structural members of the building?
- What are the correlations between a safe, hygienic/healthy living environment and neighbourhood harmony?
- What are the correlations between a safe, hygienic/healthy living environment and public health?
- What are the correlations between building safety and the community?
- How is building safety related to our living standard?



### Information on Building Safety 1

#### Roles of the Buildings Department (BD) of the HKSAR Government



- ◆ The BD enforces the Buildings Ordinance, and provides professional services to the owners and occupants of private buildings in Hong Kong
- ◆ Except for the pre-war buildings and exempted houses in the New Territories, the Building Information Centre of the BD keeps copies of building plans/records and occupation permits for all private buildings. Members of the public may apply to the BD for inspection of these copies and records
- ◆ The BD provides loans to individual owners of private buildings to carry out maintenance and repair works voluntarily or in compliance with statutory orders.
- ◆ The BD handles complaints from members of the public

## Topic 4.1 : Domestic Water Seepage Problem and the Relationship with Neighbours

Two sisters, Hiu Ling and Hiu Lee, have been living in a building for many years. They have been on good terms with people living in the same building, especially those living on the same floor and the floors above and below. Recently, the elder sister Hiu Ling found that there were signs of water seepage at the ceiling. There were also cracks and loose rendering. Therefore the sisters asked their uncle who was a qualified minor works contractor to inspect their flat.

After inspection, their uncle suspected that water was seeping from the flat above causing the loosening of rendering on their ceiling. The two sisters therefore informed the owner of the flat above of the situation and requested him to carry out repair works as soon as possible. However, the owner of the flat above claimed that no water was seeping from his flat. Therefore he would not carry out repair works to stop the seepage. Later, Hiu Ling tried many times to contact the owner of the flat above, but he refused to cooperate.

Hiu Ling and Hiu Lee were very discontented with the owner of the flat above, and the owner did not respond or talk to them at all after the incident. How can the water seepage problem be dealt with in order to reduce its negative effect on the relationship among neighbours?



### Key Concepts

#### 1. Building Safety

Building safety includes four aspects, namely structural safety, fire safety, environmental hygiene and public safety.

#### 2. Building Safety: Structural Safety

The structure of a building refers to its framework which includes the structural members of construction such as beams, floor slabs, columns and load-bearing walls. They are used to support the weight of the whole building and to resist external forces such as wind and earthquake. Structural safety of a building is the integrity of the framework formed by these elements.

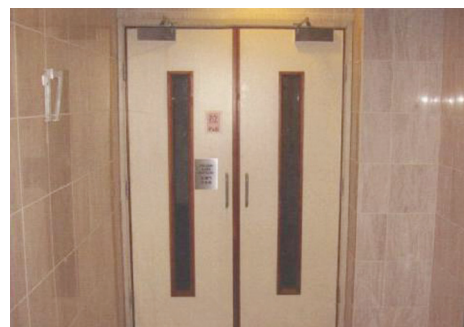




## Key Concepts

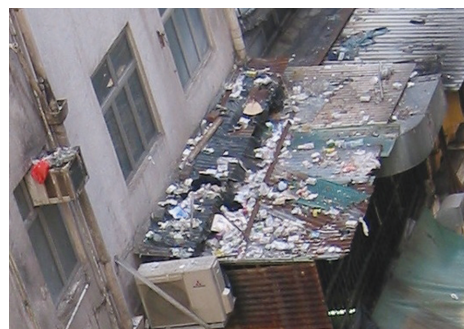
### 3. Building Safety: Fire Safety

A building is formed by different components. Some of them can resist fire so that when a fire breaks out, the structure of the building will not be damaged easily and can prevent the fire from spreading. Fire safety of a building concerns whether the fire-resisting elements can protect the lives and properties of the residents. The design of escape routes in the building should also enable the residents to escape from the building safely when a fire breaks out.



### 4. Building Safety: Environmental Hygiene

This refers to environmental hygiene problems inside and outside the building, such as defects in sewers and mis-connection of drains.



### 5. Building Safety: Public Safety

This concerns whether the conditions of the building will pose threats to public safety. For example, aluminium windows falling from height can cause casualties.

### 6. Water Seepage Problem

In most cases, water seepage is caused by defective water pipes, sanitary fittings or drainage pipes and can be rectified by simple repair works.



## 1 Common Possible Causes and Locations of Water Seepage:

### Common Causes of Water Seepage

The problem is usually related to defective water supply pipes, sanitary fittings or drainage pipes. Listed below are some of the common causes:

- Leakage in the drainage pipes of the upper, adjacent or your own flat.
- Leakage in the water supply pipes of the upper, adjacent or your own flat.
- Deteriorated waterproofing of floor slabs or bath-tub seals.
- Seepage of waste water or rain water through the roof / external wall.

#### Additional Information:

Special reference to “Common Possible Causes and Locations of Water Seepage” can be found in “Building Maintenance Guidebook (Chapter3)” on the BD website ([http://www.bd.gov.hk/english/documents/code/bmg/BDG\\_ENG.pdf](http://www.bd.gov.hk/english/documents/code/bmg/BDG_ENG.pdf))

### Common Locations of Water Seepage



Rooftop



Wall



Indoor Ceiling



## 2 Examine by Yourself - Water Seepage of Drainage System

Water seepage in the drainage system of a flat may cause nuisance to other residents. Owners are responsible for the property's maintenance, including finding out the source of water seepage and reducing its impact. Should the seepage problem occur at the ceiling of your own flat, the owner/ occupant of the upper flat should help resolve the problem. Hence, it is extremely important for the owner/ occupant to know how to check if there are any leakage or water seepage problems in the flat.

### Additional Information:

Special references to the examination of drains, pipes, and the hidden water supply pipes can be found in the brochure “Do-it-yourself water seepage test” published by BD (Website: <http://www.bd.gov.hk/english/documents/pamphlet/seepage.pdf>)



## 3 Resolving Water Seepage Problems

Water seepage can usually be rectified by simple repair works. The flat owner or occupant may also seek help from professionals to find out the source of water seepage problem and have the repair works done by qualified persons, to reduce the impacts on the building, the owner/occupant of the flat and other residents.

## 4 Problems Caused by Water Seepage

Water seepage problems not only cause troubles to the flat owner /occupant, but also affect other residents' daily life. Moreover, they may affect the building structure and create hygiene problems. Hence, flat owners are responsible for the regular checking of the drainage and water supply systems. Once water seepage is detected, owners should get repair works done as soon as possible. If not, owners may have to bear legal consequences and the relationship with neighbours may be damaged.

### Influences to the Quality of Life

Water seepage causes troubles to the flat owners and those living below, while leading to hygiene problems and poor living environment at the same time.

Water seepage on walls may affect the daily lives of the occupants of the flat. It may also result in loosening of rendering and endanger the safety of residents.

Moreover, water seepage does not only influence the individual flats, but also other occupants in the same building. Defective buried pipes may bring water seepage problems to the ceiling of the flat below and possibly result in the loosening of rendering, and this may finally affect the living environment and the hygienic condition.

Seepage of waste water will impair the hygienic/healthy living environment and affect the quality of life as well.

### Affecting Building Safety

Seepage from a defective drainage and water supply system of one single flat may affect the structural safety of the whole building. Continuous water seepage may cause damage to the building structure and result in the loosening of rendering and spalling on walls and ceilings. Moreover, ignoring the water seepage problem may eventually endanger the lives of the residents of the building.



### Damage to the Relationship with Neighbours

In most cases, victims of water seepage problems are often those living under the flat causing the seepage. However, some owners of the flats causing the seepage may not be willing to accept their own responsibilities and become uncooperative despite the fact that the flats below suffer from serious water seepage problem. The uncooperative attitude may eventually harm the neighbourly relationship.



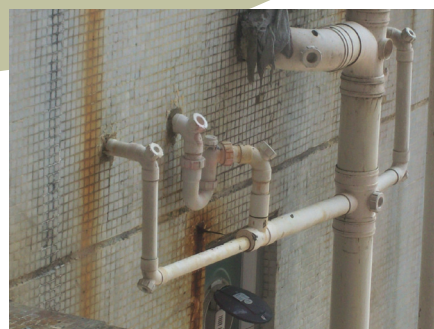


## Topic 4.2 : Drainage System and the Spread of Communicable Disease

Mr. Lam has been living in a 400-odd square feet apartment.

He was recently informed by the estate office that the trap installed on the external wall for the pipe of the floor drain had been defective and started leaking water. It was believed that the trap did not function and the estate office asked Mr. Lam to have the repair works done as soon as possible. However, since Mr. Lam was too busy and the floor drain was seldom used, he had not got the repair works done till now.

Is there anything wrong with Mr. Lam's response? What are the consequences of not carrying out the repair works? How will the community be affected?



### Key Concepts

#### 1. Public Health

American scholar C.E.A. Winslow defined the concept of “Public Health” in 1923. Winslow claimed “Public health is the Science and Art of preventing disease, prolonging life, and promoting health and efficiency through organised community effort for sanitation of the environment, the control of communicable disease, the education of the individuals in personal hygiene, the organisation of medical and nursing services for early diagnosis and preventive treatment of disease, and for the development of the social machinery to ensure everyone a standard of living adequate for the maintenance of health, so organising these benefits as to enable every resident to realise his birthright of health and longevity.” The concept has been adopted by the World Health Organization since 1952 as the official definition of modern public health.

#### Additional Information:

The definition of public health can be found in C.E.A. Winslow's publication “*The Evolution and Significance of the Modern Public Health Campaign*” by Yale University Press in 1923.

## Key Concepts

### 2. Communicable Disease

A communicable disease refers to a disease caused by pathogenic microorganisms, which is transmitted to human and animals through other human beings, animals, insects or other carriers. A communicable disease may result in a large scale epidemic. It is the most common kind of disease in the world and one of the common causes of death.

### 3. Severe Acute Respiratory Syndrome (SARS)

The Severe Acute Respiratory Syndrome, commonly known as “SARS” or “atypical pneumonia”, broke out in Hong Kong in 2003. It spread to other countries as well. SARS is usually caused by influenza virus, mycoplasma, chlamydia, adenovirus, or other seldom heard microbes. The latent period of SARS is “aperiodic”, i.e., variable. Infected patients usually have various symptoms, sometimes unobvious, for 10-14 days. It is difficult to identify the origin of sickness.

### 4. Traps

Traps are usually installed with drainage pipes. Water inside the traps is used to block gas from entering from one side of the drainage pipe to the other. Traps can also block insects from going into the building and prevent backflow of stinky smells and soils. Traps must be filled with water to function well. There are different types of traps, such as U-traps, P-shaped traps, S-shaped traps and bottle traps.

### 5. Statutory Order for Drainage Repair

According to Section 28 of the Buildings Ordinance (Chapter 123), if the drainage system of a building is defective or inadequate, affecting the environmental hygiene, the Buildings Department may issue an order requesting the owner or owners' corporation to carry out investigation and repair works.



# 1 Drainage System in a Building

Building owners or occupants should carry out inspections regularly to confirm that the drainage pipes including soil pipes, waste water pipes, ventilation pipes and underground pipes are in good condition. In case there are defects, water seepage problems or blockages, repair works should be done with no delay.

Slightly blocked drains can be cleared by using high pressure water jets or drain cleaning devices. If the drains are seriously blocked by silt or sediment, they may have to be opened up and replaced.

Access to manholes should not be obstructed by floor finishes, planters or furniture items. They should be readily accessible for regular maintenance. Using a double sealed manhole cover or repairing the defects on the manhole cover can prevent leaking of bad smell and foul air from the manhole.

In order to examine the parts of the pipes without water (such as vent pipes) to see if there are cracks or defects, owners should conduct detailed close-distance investigations. Each part of the drainage systems, especially the branch pipes, should be examined.

## 1.1 Signs of Defects in the Drainage System

- Foul smell or odd sound from drainage pipes/sanitary fittings
- Cracks in or rust stains on the drainage pipes/sanitary fittings
- Loosened pipe brackets
- Leakage or blockage of the drainage pipes/sanitary fittings
- Bubbles coming out of the water closet from time to time



Foul smell or odd sound from drainage pipes/sanitary fittings



## 1.2 Ways to Keep Drainage System in Good Condition

Building owners, owners' corporations and parties responsible for the building management and maintenance should conduct regular inspection of the drainage system and sanitary fittings to ensure that they are well maintained and function properly.

### Additional Information:

Guidelines on inspection and maintenance of drainage pipes and sanitary fittings inside residential units can be found in the pamphlet "What you need to know about drainage pipe maintenance" published by BD (Website: <http://www.bd.gov.hk/english/documents/pamphlet/DrainagePipeMaintenance.pdf>)



### 1.3 Drainage Repair

#### Appropriate Ways of Repairing Pipes and Drains of Individual Flats or Those of the Building

As the drainage system is one of the building components, flat owners or owners' corporations considering repair works of the drainage system should appoint qualified building contractors to carry out the works, to ensure that the procedures and works comply with the Buildings Ordinance and will be done in a safe manner.

Under most circumstances, owners/occupants/owners' corporations must conduct repair works immediately after discovering defects of the drainage system, in order to protect the safety of the residents. If the building owners to whom the Buildings Department issue drainage repair orders are not aware of the defects, they should appoint a qualified building contractor to conduct investigation and necessary repair works within the specified period of time. Ignoring the repair order may lead to legal consequences.

#### Appropriate Ways of Carrying Drainage Alteration Works of Individual Flats or Those of the Building

Drainage alteration works are building works. Any person (including the owner and other people such as the occupant) who intends to carry out drainage alteration works in an individual flat or in a building should appoint a qualified person to do so and the works should be carried out in compliance with the Buildings Ordinance (Cap 123).

#### Additional Information:

The Buildings Ordinance (Chapter 123) can be found in or downloaded from the Bilingual Laws Information System website of the Department of Justice (Website: <http://www.legislation.gov.hk/eng/index.htm>)



## 2 Problems Arising from Defective Drainage Pipes

### 2.1 Public Health: Transmission of Communicable Disease

Building safety includes four aspects, namely structural safety, fire safety, environmental hygiene and public safety. The conditions of drainage system are closely related to environmental hygiene.

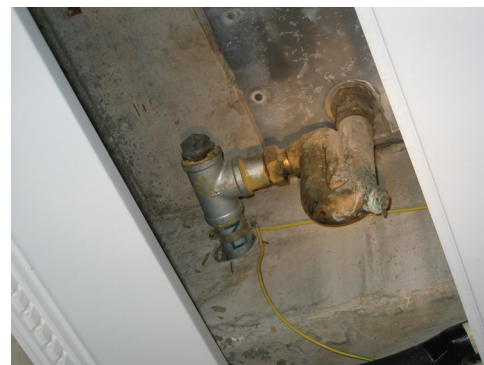
Defective drainage systems or inappropriate alteration works to the drainage system may cause water seepage problems to the building and probably endanger the health of the residents. Communicable diseases may spread through inappropriately altered or defective drainage systems.

### 2.2 Drainage System and the Transmission of Communicable Disease

From past experiences, the normal functioning of the drainage system is crucial to the prevention of the spread of communicable diseases. Hence, to protect the health of everyone, it is extremely important to ensure that the drainage system is fitted with traps, which function properly.

#### Ways to Confirm whether Household Sanitary Fittings are Fitted with Traps

Building owners/occupants may refer to the estate office if there are uncertainties about traps and sanitary fittings. Owners may appoint qualified drainage works contractors to carry out investigations. If it is found that the drainage system is not fitted with a trap or the trap is not functioning properly, owners should conduct the necessary remedial works (such as the installation of traps or the repair of defective traps) as soon as possible to ensure a healthy living environment.





### Ways to Check if the Traps on Sanitary Fittings are Functioning Properly

A trap not functioning properly will possibly cause foul smell in the washroom. The trap should be filled up with water in order to function properly. The first step for checking the normal functioning of the trap is to check if there is any water left in the trap. Dip a stick into the fitment outlet to reach the trap to see if the stick is wet. Owners may also appoint qualified professionals to conduct investigations. Once defects are found, owners should have the repair works done immediately.

### Traps and the Outbreak of Severe Acute Respiratory Syndrome (SARS)

Viruses and communicable diseases may spread through defective/cracked/dried-up drainage pipes.

With the outbreak of SARS in Hong Kong in 2003, thousands of the people in Hong Kong were infected and approximately 300 people lost their lives. According to the reports from World Health Organization (WHO) and those from experts, the rapid spreading of SARS was closely related to the buildings' poor drainage system.

On 26th March 2003, the Department of Health in Hong Kong was informed by the United Christian Hospital that 15 patients were suspected to be infected by SARS, and all of them were from Block E of Amoy Garden. Later, the number of patients from Amoy Garden increased to 213, including 107 patients from Block E. In view of the rapid spreading and the information gained by the Department (pointing out that the virus was probably transmitted via the drainage system of the building), the Government evacuated the un-infected residents to holiday camps and declared isolation of Amoy Garden Block E on 1st April 2003.

In order to find out the transmission route of the virus, the Department of Health and WHO conducted investigations at Amoy Garden. According to the reports, the spreading of SARS was highly related to the poor drainage system, especially the defective traps which were unable to prevent the contaminated air from entering the flat.

On 17th April 2003, the HKSAR Government eventually released the investigation result of the outbreak at Amoy Garden, and the report stated that the SARS virus vertically spread through Block E mainly because some of the traps dried up. Moreover, the contaminated sewage and the updraft in the lightwell resulted in rapid transmission. WHO's investigation report released on 16th May 2003 also stated that during the SARS period, most of the traps of the drainage outlets at the bathroom floor had been dried up for a long time and lost their function to block the contaminated air. Therefore, when the exhaust fan was on and the door of the bathroom was closed, the virus entered and contaminated the bathroom. Moreover, the defective drainage system and the natural flow of air in the lightwell speeded up the spreading of the virus to other floors.

According to the SARS experience, it is obvious that there are correlations between malfunctioning of drainage system and transmission of communicable disease. For a healthy living environment and for public health, building owners are urged to carry out regular investigation and maintenance of the drainage system. If there are any problems discovered, remedial actions are needed.

#### Additional Information:

Detailed information about SARS can be found in and downloaded from the website of the SARS Expert Committee (Website: <http://www.sars-expertcom.gov.hk/english/reports/reports.html>)



## Topic 4.3 : Building Safety and Public Safety

As Lunar New Year was coming soon, Mr. and Mrs. Wong cleaned their flat. When Mr. Wong was cleaning the aluminium window in the study room, he found that it was difficult to open the window. So he tried to open the window with a screwdriver. Seeing this, Mrs. Wong immediately stopped him and told him that the aluminium window in the study room was difficult to open because it had been closed and had not been inspected for a long time. She suggested finding a qualified contractor to inspect and repair it to avoid accidents...

In the above example, who is more prudent? Mr. Wong or Mrs. Wong?  
What is the correlation between the safety of building components and that of the public?

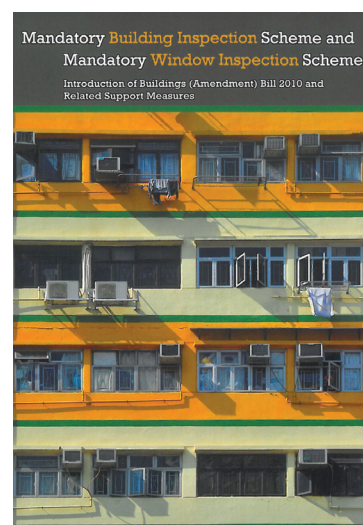
### Key Concepts

#### 1. Falling Objects from Height

Anyone who commits an offence of falling objects from height, either intentionally or unintentionally, will be prosecuted by the Police. Allowing objects to fall from any building is a criminal offence according to the Summary Offences Ordinance (Chapter 228). Section 4B(1) of the Ordinance states that if anything is dropped or allowed to fall from any building to the danger or injury of any person in or near a public place, the person who drops that thing or allows it to fall commits an offence and is liable to a fine of \$10,000 and imprisonment for 6 months.

#### 2. Mandatory Window Inspection Scheme (MWIS)

As there are incidents of falling aluminium window from time to time, the Government is planning to implement the MWIS which aims to raise building owners' awareness in proper building maintenance.







## Information on Building Safety 2

The Buildings (Amendment) Bill 2010 introduces the MWIS, under which owners of buildings aged 10 years or above (except domestic buildings not exceeding three storeys) are required to carry out inspections (and, if necessary, repair works) of all windows of the buildings once every five years.



# 1 Falling Objects from Height

## 1.1 The Problem of Falling Objects from Height in Hong Kong

From 2007 to September 2009, there were totally 3001 cases of falling objects from height reported to the Police, injuring 212, 241 and 208 people in 2007, 2008 and 2009 (from Jan. to Sept.) respectively although there were no deaths. Statistics from the Police showed that objects frequently falling from height include rubbish, food residue, miscellaneous items and aluminium windows. (Reference from: <http://www.info.gov.hk/gia/general/200911/25/P200911250130.htm>)

## 1.2 Cases of Falling Objects from Height

### Loosening Windows

According to the findings from previous incidents of falling windows, one of the major causes was the failure of rivets/screws of the hinge due to corrosion or wear and tear over time. Besides, the lack of proper maintenance and improper use of aluminium windows were also the contributing factors. Dislodgement and falling of windows may lead to damage to property and may even cost lives.



## Information on Building Safety 3

Apart from aluminium windows, falling air conditioners are also worth our attention. Supporting frames of air conditioners installed outside the building, if not maintained properly, may get rusty and loosened as a result of exposure to rain and sunshine.



## Warning Signs of Defective Aluminium Windows

### These signs include:

- Difficult to open or close the windows;
- The windows could not be closed tightly;
- There is observable distortion to the window hinge or frame;
- Greyish white powder appearing at the hinges, rusty hinges, tracks, screws and/or rivets, indicating corrosion of the aluminium;
- Loose or missing screws/rivets;
- Water leakage between window frame and sash.

When the above signs are found, building owners and occupants should appoint a qualified person immediately to carry out inspection and repair works.

## Proper Use of Aluminium Windows



Do not hang any objects on the window sash to avoid causing additional load on the bar hinges.



Do not push or pull the window sash with excessive force when the windows are hard to operate. Otherwise, this will induce excessive stress on the pivots, rivets and screws, causing their loosening or detachment.



Do not impose pressure on the window sash such as by transferring the body weight onto the sash when cleaning windows. Such extra loading, which has not been designed for, will over-stress the windows, in particular, the weakest link at the bar hinges.

## Maintenance and Repair of Aluminium Windows

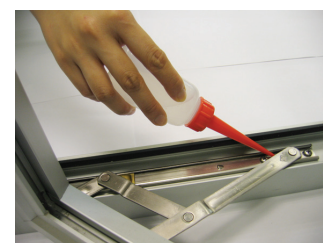
### Regular Cleaning

- Windows are subject to wear and tear and exposed to weather, thus requiring regular cleaning.
- Clear the bar hinges, sliding shoes and tracks of dust, dirt and debris frequently.
- Use water for cleaning purpose. Do not use acidic or alkaline cleaning agents. Wipe off any water left on the top of the window sash and the bottom of the frame.



### Periodic Lubrication

- Lubricate lightly the movable parts of the window such as hinges, tracks and pivoting points to avoid undesired friction and undue wear and tear of the rivets/screws when opening the windows.



### Safety Checks

- Carry out regular do-it-yourself safety checks for signs of trouble.
- Remember to check the tracks at both the top and the bottom of the sash in addition to the two sliding tracks that are fixed to the window frames. There are a total of four tracks for each sash.

Check the tracks at the top and at the bottom of the sash



### Additional Information:

For the information on the maintenance and repair of aluminium windows, please refer to the promotion pamphlet “Check your windows, keep them safe”. The relevant pamphlet can be downloaded from the BD website: [http://www.bd.gov.hk/english/documents/pamphlet/AW\\_Leaflet.pdf](http://www.bd.gov.hk/english/documents/pamphlet/AW_Leaflet.pdf)





## Information for Teachers

- Any broken or cracked glass panes should be replaced at once with glass of the same type and thickness. Locking devices of window sashes should be replaced if they cannot function properly. Otherwise, damage may result in times of typhoon.
- Bar hinges in an aluminium window system are the most common sources of problems that lead to dislodgement of sashes. They should be regularly checked for any loose fixings and deformation, cleared of dust, dirt and debris and lightly lubricated to avoid undesired friction causing undue load on the fixing.
- Should any of the aluminium glazing beads for securing the glass panes be found missing, replacement must be done at once to avoid falling of glass panes. In the process of replacing fixing components such as screws and rivets, measures against bi-metallic action leading to corrosion must be taken to avoid direct contact between two different materials.
- A common example of bi-metallic action is between aluminium and stainless steel. If stainless steel screws or rivets are used, apply bituminous paint or sealant to the holes of the hinges and window frames prior to the installation of stainless steel screws or rivets to help avoid corrosion due to bi-metallic action. After installation, apply the paint or sealant to the heads of the screws or rivets to further improve resistance to corrosion.
- Steel window frames are subject to rusting and should be regularly re-painted with primers and re-finished. Putty for holding glass panes should be maintained. Hinges should be regularly lubricated and replaced if necessary to avoid dislodgment of sashes.
- It is important that a qualified person should be appointed for the works whenever repair or replacement of defective windows or window components is required.

## 2 Falling Objects from Height and Public Safety

According to statistics, there were over 3000 reported cases of falling objects from height between 2007 and September 2009. The seriousness of this problem should not be neglected. It is not uncommon for falling objects, especially aluminium windows, to cause serious injuries or even deaths. It is therefore important for building owners and occupants to raise the awareness of the safety of aluminium windows. Hence, the integrity and safety of building elements are essential to public safety.

According to Section 4B of the Summary Offences Ordinance, if a window is dropped or allowed to fall from any building to the danger or injury of any person in or near a public place, the person commits an offence and is liable to a fine of \$10,000 and imprisonment for 6 months upon conviction. If the falling of window has caused injuries or even deaths, the families of the victims may claim compensation from the flat owner concerned through civil proceedings.

Hence, owners and occupants should use the windows in a proper way and carry out regular inspection and repair works. Attention should also be paid to windows in the common parts of a building. If a window is in danger of falling, take immediate precautionary measures (such as securing the window temporarily by closing it and locking it up, or tying it with strings) and post up warning signs to alert people not to use the window. At the same time, the management office should be informed to hire a qualified person immediately to inspect, repair or replace the window to avoid any accident and protect the safety of the public.

## Review of the Theme

- Building works are closely related to the community. Improper maintenance or alteration works would affect our community.
- Building works affect the community in different aspects. For example, defective drainage systems adversely affect community health and objects falling from height pose safety hazards to passers-by.
- Water seepage from a flat not only affects the flat concerned but also brings troubles to other residents. Improper handling may result in poor relationship with the neighbours.
- Owners are responsible for the maintenance and repair of the drainage systems both in their flat and in their building. They should also pay attention to situations where objects may fall from individual flats or the common parts of a building.
- Alteration works should be carried out in compliance with legal requirements and be conducted by qualified contractors.

Lesson	Teaching Focus, Content and Purpose	Questions for Enquiry	Modules and Topics Related to the “Curriculum and Assessment Guide”	Detailed Teaching Flow: Methods/ Activities	Teaching Materials	Related Values and Attitudes
Lesson (1)	1. Understanding how building safety issues related to interpersonal relationships	1. Is building safety merely a personal matter? Does it also relate to the community?	Module 2: Hong Kong Today  Theme 1: Quality of Life  This teaching theme aims to study the quality of life – the housing aspect – among Hong Kong residents	<b>Arousing interest (5 minutes)</b> 1. Role Playing • Students are required to have discussion on: how bad handling of domestic water seepage problems would worsen interpersonal relationships, according to the assigned roles • Related cases can be found in the Teacher’s Book - Issue 4.1  2. Short Conclusion: pointing out domestic water seepage problems are serious problems which should not be ignored, or they may damage neighbourhood relationship	Companion with the Teachers’ Book “Theme IV: Issue 4.1 and Issue 4.2” 1. Case from the Teachers’ Book issue 4.1	- Respect for quality and excellence
	2. Understanding the 4 key concepts of building safety	2. What are the correlations between a safe, hygienic/ healthy living environment and neighbourhood harmony?	Module 1: Personal Development & Interpersonal Relationships  Theme 1: Interpersonal Relationships  This teaching theme aims to study how building safety issues affect neighbourhoods harmony	<b>Interface</b>  <b>1. Explanation on the key concepts of building safety (8 minutes)</b> • Explain the 4 key concepts on building safety by using the teaching PPT a) Building Safety: Structural Safety, Fire Safety, Environmental Hygiene and Public Safety  <b>2. Explanation on the reasons of water seepage problems and its correlations with interpersonal relationships (10 minutes)</b> • Explain the importance of hygienic and safe living environment by using the teaching PPT a) Common possible causes and locations of water seepage b) Resolving domestic water seepage problems due to defective drainage system c) Problems caused by water seepage of the drainage system	2. Teaching PPT	- Cooperation - Respect for others - Social harmony - Sense of responsibility - Interdependence
	3. Understanding how domestic water seepage problem affects interpersonal relationships	3. What are the correlations between a safe, hygienic/ healthy living environment and public health?			3. Teaching PPT	- Valuing the suggestions of others - Well-being of Mankind

<p>Lesson (1)</p>	<p>4. Understanding the correlations between the outbreak of communicable diseases and hygienic problems in a building</p>		<p>Module 5: Public Health</p> <p>Theme 1: Understanding of Public Health</p> <p>This teaching theme aims to study the correlations between building safety and the spread of communicable diseases</p>	<p><b>3. Group Discussion (12 minutes)</b></p> <ul style="list-style-type: none"> <li>• The teacher may share the SARS outbreak case of Amoy Garden and related news clips, and conduct group discussion on the issue</li> <li>• 4-5 students form a group. Students are requested to have discussion based on their own knowledge. They should come up with answer agreed by all and finish the distributed worksheet (1)</li> <li>• Discussion Issue: Should the Hong Kong Government implement the Mandatory Window Inspection Scheme (MWIS)?</li> </ul> <p><b>Distribution of Assignment (5 minutes)</b></p> <p>1. Distribute worksheet (2) as after-school assignment. Students are requested to search for related information according to the roles assigned. Preparation for the following community forum session is needed.</p> <ul style="list-style-type: none"> <li>• Discussion issue: should the Hong Kong Government implement the Mandatory Window Inspection Scheme (MWIS)?</li> </ul>	<p>4. Worksheet (1)</p> <p>5. Worksheet (2)</p>	<p>Sense of responsibility</p>
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Lesson	Teaching Focus, Content and Purpose	Questions for Enquiry	Modules and Topics Related to the “Curriculum and Assessment Guide”	Detailed Teaching Flow: Methods/ Activities	Teaching Materials	Related Values and Attitudes
Lesson (2)	1. Introducing the correlations between hygienic living environment and public health	1. What impacts will be made on the community if there are unauthorised alterations to the structural members of the building?	Module 2: Hong Kong Today  Theme 1: Quality of Life  This teaching theme aims to study the quality of life – the housing aspect – among Hong Kong residents	<b>Arousing interest (5 minutes)</b> 1. Group Presentation • Group presentation on the result discussed in the previous lesson • The teacher may invite different groups to present  2. Short Conclusion: The teacher may point out poor hygiene problems of one building may lead to serious public health problems	Companion with the Teachers’ Book “Theme IV: Issue 4.2 and Issue 4.3”	- Rights - Responsibilities
	2. Understanding the correlations between the drainage system in a building and public health	2. What are the correlations between a safe, hygienic/ healthy living environment and public health?	Module 1: Personal Development & Interpersonal Relationships  Theme 1: Understanding Oneself  This teaching theme aims to help the students to build up a sense of responsibility	<b>Interface</b> <b>1. Explanation on the correlations between drainage system in a building and public health (10 minutes)</b> • Explain the importance of hygienic and safe living environment by using the teaching PPT a) Drainage system in a building b) Examples of a poor drainage system c) Drainage repair d) Public health issues caused by a defective drainage system e) Outbreak of SARS <b>2. Community Forum (10 minutes)</b> • Discussion issue: Should the Hong Kong Government implement the Mandatory Window Inspection Scheme (MWIS)? • Groups with different roles assigned: e.g. government officer, members of the Legislative Council, commentator, contractor, take turns to speak • The group playing the role of residents should raise questions to other participants in the forum • The teacher may conclude the forum by giving credits to the good points and clarifying the misunderstandings	1. Teaching PPT	- Valuing the suggestions of others - Well-being of Mankind - Sense of Responsibility
	3. Understanding unauthorised alteration to the drainage system is the main reason causing the SARS outbreak				2. Name stands for role play	

<p><b>Lesson (2)</b></p>	<p>4. Understanding the responsibilities of different stakeholders on the problem of falling objects from height</p> <p>5. Understanding the problem of objects falling from height in Hong Kong</p> <p>6. Understanding the correlations between building safety and public safety</p> <p>7. Understanding building safety is closely related to the community, and owners are responsible for maintaining building safety</p>	<p>3. What are the correlations between building safety and the community?</p> <p>4. How is building safety related to our living standard?</p>	<p>Module 5: Public Health</p> <p>Theme 1: Understanding of Public Health</p> <p>This teaching theme aims to study the correlations between building safety and spread of communicable diseases</p>	<p><b>3. Explanation on the correlations between building safety and public safety (10 minutes)</b></p> <ul style="list-style-type: none"> <li>• Explain the correlations between building safety and public safety by using the teaching PPT             <ol style="list-style-type: none"> <li>Falling objects from height in Hong Kong</li> <li>Cases of falling objects from height: loosened windows</li> <li>Warning signs of defective aluminium windows</li> <li>Usage, maintenance and repair of aluminium windows</li> <li>Falling objects from height and public safety</li> </ol> </li> </ul> <p><b>Concluding the Lesson (5 minutes)</b></p> <ol style="list-style-type: none"> <li>Review the teaching theme, strengthen students' knowledge, remind them that building safety is closely related to the community, and owners are most responsible for building safety</li> <li>Distribute after-school assignment worksheets</li> </ol>	<p>3. Teaching PPT</p> <p>4. After-school assignment worksheet</p>	
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